

9855917

Basic Patent (No,Kind,Date): DE 3942728 Cl 910523 <No. of Patents: 011>

PATENT FAMILY:

AUSTRIA (AT)

Patent (No,Kind,Date): AT 140461 E 960815
IMMUNOLOGISCH AKTIVE PROTEINE VON BORRELIA BURGDORFERI,
ZUSAMMENHAENGENDE TESTKITS UND IMPFSTOFF (German)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)
Author (Inventor): FUCHS RENATE (DE); WILSKE BETTINA (DE);
PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)
Priority (No,Kind,Date): DE 3942728 A 891222; DE 4018988 A
900613
Applic (No,Kind,Date): EP 91902687 A 901221
Addnl Info: 00506868 960717
IPC: * C07K-014/00; C12N-015/31; G01N-033/569; A61K-039/02
CA Abstract No: * 116(09)082043S; 116(09)082044T
Derwent WPI Acc No: * C 91-149753; C 91-222844
Language of Document: German

AUSTRIA (AT)

Legal Status (No,Type,Date,Code,Text):
AT 140461 R 960815 AT REF CORRESPONDS TO EP-PATENT
(ENTSPRICHT EP-PATENT)
EP 506868 P 960717

AUSTRALIA (AU)

Patent (No,Kind,Date): AU 9170586 A1 910724
IMMUNOLOGICALLY ACTIVE PROTEINES FROM BORRELIA BURGDORFERI, RELATED
TEST KITS AND VACCINE (English)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE
Author (Inventor): FUCHS RENATE; WILSKE BETTINA; PREAC-MURSIC VERA;
MOTZ MANFRED; SOUTSCHEK ERWIN
Priority (No,Kind,Date): WO 90EP2282 A 901221; DE 3942728 A
891222; DE 4018988 A 900613
Applic (No,Kind,Date): AU 9170586 A 901221
IPC: * C07K-013/00; C12N-015/31; G01N-033/569; A61K-039/02
Derwent WPI Acc No: * C 91-149753
Language of Document: English

CANADA (CA)

Patent (No,Kind,Date): CA 2072008 AA 910623
IMMUNOLOGICALLY ACTIVE PROTEINS FROM BORRELIA BURGDORFERI, RELATED TEST
KITS AND VACCINE (English; French)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)
Author (Inventor): FUCHS RENATE (DE); WILSKE BETTINA (DE);
PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHECK ERWIN (DE)
Priority (No,Kind,Date): DE 3942728 A 891222; DE 4018988 A
900613
Applic (No,Kind,Date): CA 2072008 A 901221
IPC: * C12N-015/31; C07K-013/00; G01N-033/569; A61K-039/02
CA Abstract No: * 116(09)082043S; 116(09)082044T
Derwent WPI Acc No: * C 91-149753; C 91-222844
Language of Document: English

GERMANY (DE)

Patent (No,Kind,Date): DE 4018988 A1 911219
IMMUNOLOGISCH AKTIVE PROTEINE VON BORRELIA BURGDORFERI, TESTKITS, DIE
DIESE PROTEINE ENTHALTEN UND ZUM NACHWEIS VON ANTIKOERPERN IN
UNTERSUCHUNGSSFLUSSIGKEITEN GEIGNET SIND, MONOKLONALE ANTIKOERPER,
DIE GEGEN DIE IMMUNOLOGISCH AKTIVEN PROTEINE GERICHTET SIND UND DIE
VERWENDUNG DIESER PROTEINE ALS IMPFSTOFFE GEGEN DURCH
BORRELIA-STAEMME HERVORGERUFENE INFektIONEN (German)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)

Author (Inventor): FUCHS RENATE DR (DE); WILSKA BETTINA DR (DE); PREAC-MURSIC VERA DR (DE); MOTZ MANFRED DR (DE); SOUTSCHEK ERWIN DR (DE)

Priority (No,Kind,Date): DE 4018988 A 900613

Appliec (No,Kind,Date): DE 4018988 A 900613

IPC: * C07K-015/04; C07K-015/28; C12N-015/31; C12Q-001/28; C12Q-001/68 ; A61K-037/02; A61K-039/395; G01N-033/53; G01N-033/566

Derwent WPI Acc No: * C 91-222844

Language of Document: German

Patent (No,Kind,Date): DE 59010422 CO 960822

IMMUNOLOGISCHE AKTIVE PROTEINE VON BORRELIA BURGDORFERI, ZUSAMMENHAENGENDE TESTKITS UND IMPFSTOFF (German)

Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)

Author (Inventor): FUCHS RENATE (DE); WILSKA BETTINA (DE); PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)

Priority (No,Kind,Date): DE 59010422 A 901221; DE 3942728 A 891222; DE 4018988 A 900613; WO 90EP282 W 901221

Appliec (No,Kind,Date): DE 59010422 A 901221

IPC: * C07K-014/00; C12N-015/31; G01N-033/569; A61K-039/02

CA Abstract No: * 116(09)082043S; 116(09)082044T

Derwent WPI Acc No: * C 91-149753; C 91-222844

Language of Document: German

Patent (No,Kind,Date): DE 3942728 C1 910523

IMMUNOLOGISCHE AKTIVE PROTEINE VON BORRELIA BURGDORFERI, MONOKLONALE ANTIKOERPER, DIE GEGEN DIE IMMUNOLOGISCHE AKTIVEN PROTEINE GERICHTET SIND UND DIE VERWENDUNG DIESER PROTEINE ZUM NACHWEIS VON ANTIKOERPERN IN UNTERSUCHUNGSEFLUSSIGKEITEN UND ALS IMPFSTOFFE GEGEN DURCH BORRELIA-STAEAMME HERVORGERUFEENE INFektIONEN (German)

Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)

Author (Inventor): FUCHS RENATE DR (DE); WILSKA BETTINA DR (DE); PREAC-MURSIC VERA DR (DE); MOTZ MANFRED DR (DE); SOUTSCHEK ERWIN DR (DE)

Priority (No,Kind,Date): DE 3942728 A 891222

Appliec (No,Kind,Date): DE 3942728 A 891222

Filing Details: DE C1 D1 Grant of a patent without OS

IPC: * C07K-015/04; C12N-015/63; C07K-015/28; G01N-033/53; G01N-033/68 ; A61K-039/02; A61K-049/00; C12Q-001/28; C12P-021/00; C12R-001-19; C07K-003/20

CA Abstract No: * 116(09)082043S

Derwent WPI Acc No: ; C 91-149753

Language of Document: German

GERMANY (DE)

Legal Status (No,Type,Date,Code,Text):			
DE 3942728	P	891222	DE AE DOMESTIC APPLICATION (PATENT APPLICATION) (INLANDSAMMELDUNG (PATENTANMELDUNG))
DE 3942728		A 891222	DE 3942728 A 891222
DE 3942728	P	910523	DE D1 GRANT (NO UNEXAMINED APPLICATION PUBLISHED) PATENT LAW 81 (PATENTERTEILUNG (KEINE OS) PATG. 81)
DE 3942728	P	910523	DE 8100 PUBLICATION OF THE EXAMINED APPLICATION WITHOUT PUBLICATION OF UNEXAMINED APPLICATION (BEKENNTMACHUNG DER ERTEILUNG OHNE VORHERIGE OFFENLEGUNG)
DE 3942728	P	911024	DE 8363 OPPOSITION AGAINST THE PATENT (EINSPRUCH GEGEN DAS PATENT ERHOBEN)
DE 3942728	P	970116	DE 8339 CEASED/NON-PAYMENT OF THE ANNUAL FEE (WEGEN NICHTZ. D. JAHRESGEB. ERLOSCHEN)
DE 4018988	P	900613	DE AE DOMESTIC APPLICATION (PATENT APPLICATION) (INLANDSAMMELDUNG (PATENTANMELDUNG))
DE 4018988		A 900613	DE 4018988 A 900613
DE 4018988	P	911219	DE A1 LAYING OPEN FOR PUBLIC INSPECTION (OFFENLEGUNG)
DE 4018988	P	970703	DE 8110 REQUEST FOR EXAMINATION PARAGRAPH 44 (EINGANG VON PRUEFUNGSANTRÄGEN PAR. 44)

DE 59010422 P 960822 DE REF CORRESPONDS TO (ENTSPRICHT)
EP 506868 P 960822
DE 59010422 P 970717 DE 8363 OPPOSITION AGAINST THE PATENT
(EINSPRUCH GEGEN DAS PATENT ERHOBEN)

DENMARK (DK)

Patent (No,Kind,Date): DK 506868 T3 960812
IMMUNOLOGISK AKTIVE PROTEINER FRA BORRELIA BURGDORFERI, TILHOERENDE
TESTKITS OG VACCINE (Danish)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)
Author (Inventor): FUCHS RENATE (DE); WILSKE BETTINA (DE);
PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)
Priority (No,Kind,Date): DE 3942728 A 891222; DE 4018988 A
900613
Applic (No,Kind,Date): DK 919102687 A 901221
IPC: * C07K-013/00; A61K-039/02; C12N-015/31; G01N-033/569
CA Abstract No: * 116(09)082043S; 116(09)082044T
Derwent WPI Acc No: * C 91-149753; C 91-222844
Language of Document: Danish

EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 506868 A1 921007
IMMUNOLOGICALLY ACTIVE PROTEINES FROM BORRELIA BURGDORFERI, RELATED
TEST KITS AND VACCINE (English; French; German)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)
Author (Inventor): FUCHS RENATE (DE); WILSKE BETTINA (DE);
PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)
Priority (No,Kind,Date): WO 90EP2282 W 901221; DE 3942728 A
891222; DE 4018988 A 900613
Applic (No,Kind,Date): EP 91902687 A 901221
Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; IT; LI;
LU; NL; SE
IPC: * C07K-013/00; C12N-015/31; G01N-033/569; A61K-039/02
CA Abstract No: * 116(09)082043S; 116(09)082044T
Derwent WPI Acc No: * C 91-149753; C 91-222844
Language of Document: German
Patent (No,Kind,Date): EP 506868 B1 960717
IMMUNOLOGICALLY ACTIVE PROTEINES FROM BORRELIA BURGDORFERI, RELATED
TEST KITS AND VACCINE (English; French; German)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)
Author (Inventor): FUCHS RENATE (DE); WILSKE BETTINA (DE);
PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)
Priority (No,Kind,Date): DE 4018988 A 900613; DE 3942728 A
891222; WO 90EP2282 W 901221
Applic (No,Kind,Date): EP 91902687 A 901221
Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; IT; LI;
LU; NL; SE
IPC: * C07K-014/00; C12N-015/31; G01N-033/569; A61K-039/02
CA Abstract No: * 116(09)082043S; 116(09)082044T
Derwent WPI Acc No: * C 91-149753; C 91-222844
Language of Document: German

EUROPEAN PATENT OFFICE (EP)

Legal Status (No,Type,Date,Code,Text):
EP 506868 P 891222 EP AA PRIORITY (PATENT APPLICATION)
(PRIORITAET (PATENTANMELDUNG))
DE 3942728 A 891222
EP 506868 P 900613 EP AA PRIORITY (PATENT APPLICATION)
(PRIORITAET (PATENTANMELDUNG))
DE 4018988 A 900613
EP 506868 P 901221 EP AA PCT-APPLICATION (PCT-ANMELDUNG)
WO 90EP2282 W 901221
EP 506868 P 901221 EP AE EP-APPLICATION (EUROPAEISCHE
ANMELDUNG)
EP 91902687 A 901221
EP 506868 P 921007 EP AK DESIGNATED CONTRACTING STATES IN
AN APPLICATION WITH SEARCH REPORT (IN EINER

ANMELDUNG BENANNTTE VERTRAGSSSTAATEN)
 AT BE CH DE DK ES FR GB IT LI LU NL SE
 EP 506868 P 921007 EP A1 PUBLICATION OF APPLICATION WITH
 SEARCH REPORT (VEROEFFENTLICHUNG DER
 ANMELDUNG MIT RECHERCHENBERICHT)
 EP 506868 P 921007 EP 17P REQUEST FOR EXAMINATION FILED
 (PRUEFUNGSANTRAG GESTELLT)
 920619
 EP 506868 P 930428 EP 17Q FIRST EXAMINATION REPORT
 (ERSTER PRUEFUNGSBESCHEID)
 930316
 EP 506868 P 960717 EP AK DESIGNATED CONTRACTING STATES
 MENTIONED IN A PATENT SPECIFICATION (IN
 EINER PATENTSCHRIFT ANGEFUEHRTE BENANNTTE
 VERTRAGSSSTAATEN)
 AT BE CH DE DK ES FR GB IT LI LU NL SE
 EP 506868 P 960717 EP B1 PATENT SPECIFICATION
 (PATENTSCHRIFT)
 EP 506868 P 960717 EP REF IN AUSTRIA REGISTERED AS: (IN
 AT EINGETRAGEN ALS:)
 AT 140461 R 960815
 EP 506868 P 960812 DK T3/REG TRANSLATION OF EP PATENT
 EP 506868 P 960820 EP ITF IT: TRANSLATION FOR A EP PATENT
 FILED (IT: DEPOSITO TRADUZIONE DI BREVETTO
 EUROPEO)
 ST. DR. CAVATTONI ING. A. RAIMONDI
 EP 506868 P 960822 EP REF CORRESPONDS TO: (ENTSPRICHT)
 DE 59010422 P 960822
 EP 506868 P 960906 EP ET FR: TRANSLATION FILED (FR:
 TRADUCTION A ETE REMISE)
 EP 506868 P 960925 EP GBT GB: TRANSLATION OF EP PATENT
 FILED (GB SECTION 77(6)(A)/1977) (GB:
 TRANSLATION OF EP PATENT FILED (GB SECT.
 77(6)(A)/1977))
 960902
 EP 506868 P 961031 CH NV/REG NEW AGENT (NEUER
 VERTRETER/NOUVEAUX MANDATAIRES/NUOVI
 MANDATARI)
 PATENTWAELTE SCHAAD, BALASS, MENZL &
 PARTNER AG
 EP 506868 P 961201 ES FG2A/REG DEFINITIVE PROTECTION
 (PROTECCION DEFINITIVA)
 2092560T3
 EP 506868 P 970611 EP 26 OPPOSITION FILED (EINSPRUCH
 EINGELEGT)
 970411 RAVO DIAGNOSTIKA GMBH ; 970417 IMMUNO
 AKTIENGESELLSCHAFT
 EP 506868 P 970801 EP NLR1 NL: OPPOSITION HAS BEEN FILED
 WITH THE EPO (NL: EUROPESE OCTROOIJEN,
 WAARTEGEN OPPOSITIE IS INGESTELD)
 RAVO DIAGNOSTIKA GMBH; IMMUNO
 AKTIENGESELLSCHAFT
 EP 506868 P 981209 EP R26 OPPOSITION FILED (CORRECTION)
 (EINSPRUCH EINGELEGT (KORR.))
 970411 RAVO DIAGNOSTIKA GMBH ; 970417 IMMUNO
 AKTIENGESELLSCHAFT
 EP 506868 P 990201 EP NLR1 NL: OPPOSITION HAS BEEN FILED
 WITH THE EPO (NL: EUROPESE OCTROOIJEN,
 WAARTEGEN OPPOSITIE IS INGESTELD)
 RAVO DIAGNOSTIKA GMBH; IMMUNO
 AKTIENGESELLSCHAFT

SPAIN (ES)

Patent (No,Kind,Date): ES 2092560 T3 961201
 PROTEINAS INMUNOLÓGICAMENTE ACTIVAS DE BORRELIA BURGDORFERI, ESTUCHES
 DE ENSAYO RELACIONADOS Y VACUNA. (Spanish)
 Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE
 Author (Inventor): FUCHS RENATE (DE); WILSKE BETTINA (DE);

PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)
Priority (No,Kind,Date): DE 3942728 A 891222; DE 4018988 A
900613
Applic (No,Kind,Date): ES 91092687 EP 901221
Addnl Info: 0506868 EP patent valid in AT
IPC: * C07K-014/00; C12N-015/31; G01N-033/569; A61K-039/02
CA Abstract No: * 116(09)082043S; 116(09)082044T
Derwent WPI Acc No: * C 91-149753; C 91-222844
Language of Document: Spanish

SPAIN (ES)

Legal Status (No,Type,Date,Code,Text):
ES 2092560 P 961201 ES FG2A DEFINITIVE PROTECTION
(PROTECCION DEFINITIVA)
506868

WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No,Kind,Date): WO 9109870 A1 910711
IMMUNOLOGICALLY ACTIVE PROTEINES FROM BORRELIA BURGDORFERI, RELATED
TEST KITS AND VACCINE (English)
Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (DE)
Author (Inventor): FUCHS RENATE (DE); WILSE BETTINA (DE);
PREAC-MURSIC VERA (DE); MOTZ MANFRED (DE); SOUTSCHEK ERWIN (DE)
Priority (No,Kind,Date): DE 3942728 A 891222; DE 4018988 A
900613
Applic (No,Kind,Date): WO 90EP2282 A 901221
Designated States: (National) AU; CA; FI; JP; NO; US (Regional) AT;
BE; CH; DE; DK; ES; FR; GB; GR; IT; LU; NL; SE
Filing Details: WO 130000 With international search report; Before
expiration of time limit for amending the claims and to be
republished in the event of the receipt of the amendments
IPC: * C07K-013/00; C12N-015/31; G01N-033/569; A61K-039/02
CA Abstract No: ; 116(09)082044T
Derwent WPI Acc No: ; C 91-222844
Language of Document: German

WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Legal Status (No,Type,Date,Code,Text):
WO 9109870 P 891222 WO AA PRIORITY (PATENT)
DE 3942728 A 891222
WO 9109870 P 900613 WO AA PRIORITY (PATENT)
DE 4018988 A 900613
WO 9109870 P 901221 WO AE APPLICATION DATA (APPL. DATA)

WO 9109870 P 910711 WO 90EP2282 A 901221
WO AK DESIGNATED STATES CITED IN A
PUBLISHED APPLICATION WITH SEARCH REPORT
(DESIGNATED STATES CITED IN A PUBLISHED APPL.
WITH SEARCH REPORT)
AU CA FI JP NO US
WO 9109870 P 910711 WO AL DESIGNATED COUNTRIES FOR
REGIONAL PATENTS CITED IN A PUBLISHED
APPLICATION WITH SEARCH REPORT (DESIGNATED
COUNTRIES FOR REGIONAL PATENTS CITED IN A
PUBLISHED APPL. WITH SEARCH REPORT)
AT BE CH DE DK ES FR GR GR IT LU NL SE
WO 9109870 P 910711 WO AI PUBLICATION OF THE INTERNATIONAL
APPLICATION WITH THE INTERNATIONAL SEARCH
REPORT (PUB. OF THE INTERNATIONAL APPL. WITH
THE INTERNATIONAL SEARCH REPORT)
WO 9109870 P 920622 WO ENP ENTRY INTO THE NATIONAL PHASE
IN:

008718825

WPI Acc No: 91-222844/199130

Related WPI Acc No: 91-149753

XRAM Acc No: C91-096793

XRPX Acc No: N91-170094

New Borrelia burgdorferi proteins - useful as immunoassay reagents and antigens for vaccine prodn.

Patent Assignee: MIKROGEN MOLEKULARBIOLOGISCHE (MIKR-N); MIKROGEN MOLEKULAR (MIKR-N)

Inventor: FUCHS R; MOTZ M; PREAC-MURSIC V; SOUTSCHEK E; WILSKE B

Number of Countries: 019 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
WO 9109870	A	19910711					199130 B
AU 9170586	A	19910724					199143
DE 4018988	A	19911219	DE 4018988	A	19900613		199201
EP 506868	A1	19921007	WO 90EP2282	A	19901221	C07K-013/00	199241
			EP 91902687	A	19901221		
EP 506868	B1	19960717	WO 90EP2282	A	19901221	C07K-014/00	199633
			EP 91902687	A	19901221		
DE 59010422	G	19960822	DE 510422	A	19901221	C07K-014/00	199639
			WO 90EP2282	A	19901221		
			EP 91902687	A	19901221		
ES 2092560	T3	19961201	EP 91902687	A	19901221	C07K-014/00	199704

Priority Applications (No Type Date): DE 4018988 A 19900613; DE 3942728 A 19891222

Cited Patents: 3.Jnl.Ref; EP 252641

Patent Details:

Patent Kind Lan Pg Filing Notes Application Patent

WO 9109870 A

Designated States (National): AU CA FI JP NO US

Designated States (Regional): AT BE CH DE DK ES FR GB IT LI LU NL SE

EP 506868 Al G 64 Based on WO 9109870

Designated States (Regional): AT BE CH DE DK ES FR GB IT LI LU NL SE

EP 506868 B1 G 50 Based on WO 9109870

Designated States (Regional): AT BE CH DE DK ES FR GB IT LI LU NL SE

DE 59010422 G Based on EP 506868

Based on WO 9109870

ES 2092560 T3 Based on EP 506868

Abstract (Basic): WO 9109870 A

Immunologically active proteins (I) of Borrelia burgdorferi, in a form free of other proteins derived from B. burgdorferi, are new.

(I) are recombinant proteins with molecular wts. of 17 kD (p17), 22 kD (pC), 41 kD (p41 = flagellin), 100 kD (p100) and 31 kD (OspA). The amino acid sequences of pC, p41, p100 and OspA are given. (I) have been produced by cloning restriction fragments of DNA from B. burgdorferi (DSM 5662) in E. coli.

USE/ADVANTAGE - (I) are useful (a) as immunoassay reagents for detection of antibodies directed against Borrelia spp., esp. for early diagnosis of lyme borreliosis, and (b) antigens for prodn. of vaccines against infections caused by Borrelia spp., esp. lyme borreliosis. (I) give a good antibody response with little cross-reactivity with related pathogens, esp. the syphilis pathogen Treponema pallidum.

In an example, an E. coli clone producing a p41 fusion protein was produced by amplifying B. burgdorferi DNA by PCR using primers correspond. to the translational start and 3' end sequences of flagellin, digesting the prod. with BamHI and PstI, ligating the resulting fragments into BamHI/PstI-digested pUC8, and transforming E. coli JM 109 with the prod. (64pp Dwg.No.0/7)

Abstract (Equivalent): EP 506868 B

Immunologically active proteins (I) of Borrelia burgdorferi, in a form free of other proteins derived from B. burgdorferi, are new. (I)

are recombinant proteins with molecular wts. of 17 kD (p17), 22 kD (pC), 41 kD (p41 = flagellin), 100 kD (p100) and 31 kD (OspA). The amino acid sequences of pC, p41, p100 and OspA are given. (I) have been produced by cloning restriction fragments of DNA from *B.burgdorferi* (DSM 5662) in E.coli.

USE/ADVANTAGE - (I) are useful (a) as immunoassay reagents for detection of antibodies directed against *Borrelia* spp., esp. for early diagnosis of lyme borreliosis, and (b) antigens for prodrn. of vaccines against infections caused by *Borrelia* spp., esp.lyme borreliosis.

(I) give a good antibody response with little cross-reactivity with related pathogens, esp. the syphilis pathogen *Treponema pallidum*.

In an example, an *E. coli* clone produced a p41 fusion protein was produced by amplifying *B. burgdorferi* DNA by PCR using primers corresp. to the translational start and 3' end sequences of flagellin, digesting the prod. with BamHI and PstI, ligating the resulting fragments into BamHI/PstI-digested pUC8, and transforming *E.coli* JM 109 with the prod..

(Dwg. 0/7)

Title Terms: NEW; BORRELIA; PROTEIN; USEFUL; IMMUNOASSAY; REAGENT; ANTIGEN; VACCINE; PRODUCE

Derwent Class: B04; D16; S03

International Patent Class (Main): C07K-013/00; C07K-014/00

International Patent Class (Additional): A61K-037/02; A61K-039/02; C07K-015/04; C12N-015/31; C12Q-001/28; G01N-033/56; G01N-033/569

File Segment: CPI; EPI

Manual Codes (CPI/A-N): B02-V02; B04-B02C; B04-B04A1; B04-B04A5; B04-B04C1; B04-B04C3; B11-C07A4; B12-K04A; D05-C12; D05-H03B; D05-H04; D05-H07; D05-H09

Manual Codes (EPI/S-X): S03-E14H4

Chemical Fragment Codes (M1):

01 M421 M423 M710 M761 M903 N102 P831 Q233 V279 V288 V752

Chemical Fragment Codes (M6):

03 M903 P831 Q233 R515 R521 R533 R624 R627 R630 R635

1/19/1

DIALOG(R) File 351:DERWENT WPI
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008645724

WPI Acc No: 91-149753/199121
Related WPI Acc No: 91-222844
XRAM Acc No: C91-064766
XRPX Acc No: N91-114972

New immunologically active proteins derived from Borrelia burgdorferiensis polyethylene vessel and a high density polyethylene sealing cap - useful as vaccine and for quick accurate diagnosis of Borrelia infections

Patent Assignee: MIKROGEN MOLEKULARB (MIKRN)

Inventor: FUCHS R; MOTZ M; SOUTSCHEK R; WILSKE B
Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicant No	Kind	Date	Main IPC	Week
DE 3942728	C	19910523	DE 3942728	A	19891222		199121 B

Priority Applications (No Type Date): DE 3942728 A 19891222

Abstract (Basic): DE 3942728 C

New pure immunologically active proteins derived from Borrelia burgdorferiei are claimed. The proteins are produced from DNA isolated from Borrelia burgdorferiei (DSM No.5662). They can have molecular weights of 41, 22, 17 or 100 kDa. The following partial sequences are specifically claimed for the 22 kDa protein:

Lys-Ile-Thr-Asp-Ser-Asn -Ala-Thr-Val-Leu-Ala-Val-Lys.
and/or Asp-Leu-Phe-Glu-Ser-Val -Glu-Gly-Leu-Leu-Lys.

The 100 kDa protein preferably has a partial sequence of formula.
Glu-Leu-Asp-Lys-Glu-Lys-Leu-Lys -Asp-Phe-Val-Asn-Leu-Asp
-Leu-Glu-Phe-Val-Asn-Thr. Also claimed are monoclonal antibodies produced from B. burgdorferi DSM No.5662.

USE/ADVANTAGE - For the preparation of vaccines against Borrelia infections (claimed), e.g. early summer meningoencephalitis or Lyme borreliosis. Because of their purity, the proteins are also useful for quick, economical and accurate diagnosis of such infections, without the risk of confusion with similar diseases such as syphilis. (25pp Dwg.No.0/7)

Title Terms: NEW; IMMUNOLOGICAL; ACTIVE; PROTEIN; DERIVATIVE; POLYETHYLENE; VESSEL; HIGH; DENSITY; POLYETHYLENE; SEAL; CAP; USEFUL; VACCINE; QUICK; ACCURACY; DIAGNOSE; INFECT

Derwent Class: B04; D16

International Patent Class (Additional): A61K-039/02; A61K-049/00;
C07K-015/04; C12N-015/63; C12Q-001/28; G01N-033/53

File Segment: CPI

Manual Codes (CPI/A-N): B02-V02; B04-B02B1; B04-B04A5; B04-B04C5; B11-C07A4
; B12-K04A; D05-C12; D05-H04; D05-H07; D05-H11; D05-H12

Chemical Fragment Codes (M1):

01 M421 M423 M431 M710 M782 M903 N102 N135 P831 Q233 V288 V500 V540
V752

Chemical Fragment Codes (M6):

06 M903 P831 Q233 R515 R521 R621 R624 R626 R635